Cisco UCS 6600 Series Fabric Interconnects

© 2026 Cisco and/or its affiliates. All rights reserved.

Contents

Cisco Unified Computing System overview	3
Product overview	3
Features and benefits	7
Product specifications	9
Regulatory standards compliance: safety and EMC	10
Ordering information	11
Warranty information	12
Cisco environmental sustainability	12
Cisco Services for Unified Computing	12
Why Cisco?	12
Cisco Capital	13
For more information	13

© 2026 Cisco and/or its affiliates. All rights reserved.

Cisco Unified Computing System overview

The Cisco Unified Computing System™ (Cisco UCS®) is a next-generation data center platform that unites computing, networking, storage access, and virtualization resources into a cohesive system designed to reduce Total Cost of Ownership (TCO) and increase business agility. The system integrates a low-latency, lossless 10/25/40/50/100/400 Gigabit Ethernet unified network fabric with enterprise-class, x86-architecture servers. The system is an integrated, scalable, multi-chassis platform in which all resources participate in a unified management domain (Figure 1).

Product overview

The Cisco UCS 6600 Series Fabric Interconnects are a core part of the Cisco Unified Computing System, providing both network connectivity and management capabilities for the system (Figure 2). The Cisco UCS 6600 Series offer line-rate, low-latency, lossless 10/25/40/50/100/400 Gigabit Ethernet, 16/32/64G Fibre Channel, NVMe over Fabric, and Fibre Channel over Ethernet (FCoE) functions.

The Cisco UCS 6600 Series provide the management and communication backbone for the Cisco UCS X-Series Compute Nodes, UCS 9508 X-Series Server Chassis, UCS B-Series Blade Servers, UCS 5108 B-Series Server Chassis, and UCS Managed C-Series Rack Servers. All servers attached to a Cisco UCS 6600 Series Fabric Interconnect become part of a single, highly available management domain. In addition, by supporting a unified fabric, Cisco UCS 6600 Series Fabric Interconnect provides both the LAN and SAN connectivity for all servers within its domain.

UCS Unified fabric: I/O consolidation

The Cisco UCS 6600 series Fabric Interconnects are built to consolidate LAN and SAN traffic onto a single unified fabric, saving on Capital Expenditures (CapEx) and Operating Expenses (OpEx) associated with multiple parallel networks, different types of adapter cards, switching infrastructure, and cabling within racks. The unified ports allow ports in the fabric interconnect to support direct connections from Cisco UCS to existing native Fibre Channel SANs. The capability to connect to a native Fibre Channel protects existing storage-system investments while dramatically simplifying in-rack cabling.

UCS 6600 series Fabric Interconnects support I/O consolidation with end-to-end network virtualization, visibility, and QoS guarantees for the following LAN and SAN traffic.

- FC SAN, IP Storage (iSCSI, NFS), NVMEoF (NVMe/FC, NVMe/TCP, NVMe over ROCEv2)
- Server management and LAN traffic

The I/O consolidation under the UCS 6600 series fabric interconnects along with the stateless policy-driven architecture of UCS and the hardware acceleration of the UCS Virtual Interface card provides great simplicity, flexibility, resiliency, performance, and TCO savings for the customer's compute infrastructure.

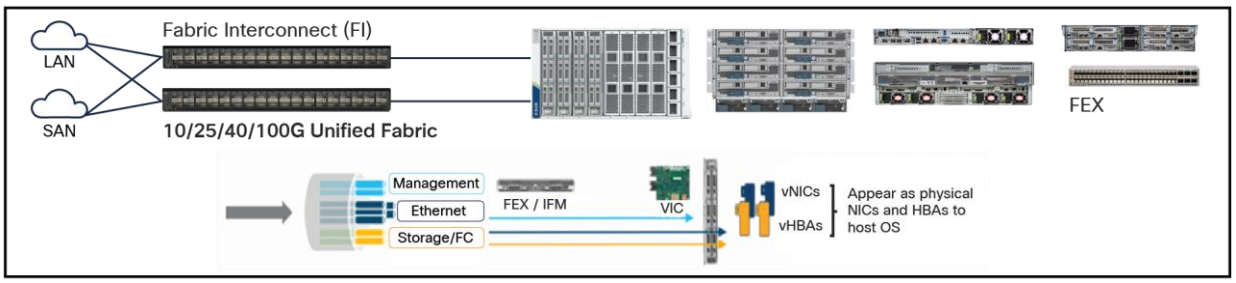


Figure 1.
Cisco UCS Unified Fabric

© 2026 Cisco and/or its affiliates. All rights reserved.

Management Options

Intersight Managed Mode

The Cisco UCS 6600 series Fabric Interconnects can be managed through Cisco Intersight®. The UCS 6600 series Fabric Interconnects support Intersight Managed Mode (IMM), which enables full manageability of Cisco UCS elements behind the UCS 6600 series Fabric Interconnects through Cisco Intersight.

UCS 6600 series Fabric Interconnects in Intersight managed mode will support Cisco UCS product models, including Cisco UCS X-/B-Series Servers, and C-Series Rack Servers, as well as the associated storage resources and networks.

Cisco UCS Manager

The Cisco UCS 6600 series Fabric Interconnects host and run Cisco UCS Manager in a highly available configuration, enabling the fabric interconnects to fully manage all Cisco UCS elements.

Cisco UCS Manager (UCSM) on UCS 6600 Series Fabric Interconnects will support Cisco UCS product models, including Cisco UCS X/B-Series Servers and C-Series Rack Servers, as well as the associated storage resources and networks.

Cisco UCS Manager typically is deployed in a clustered active/passive configuration on redundant fabric interconnects connected through dual 10/100/1000 Ethernet clustering ports.

Connectivity

Connectivity for the Cisco UCS X9508 X-Series Chassis is maintained through the Cisco UCS X9108-IFM-100G or X9108-IFM-25G Intelligent Fabric Module (IFM) in each X-series chassis.

Connectivity to the Cisco UCS 5108 Blade Server Chassis is maintained through the Cisco UCS 2408 Series Fabric Extenders in each blade chassis.

The Cisco UCS C-series servers can directly connect to UCS 6600 series Fabric Interconnects through the UCS VIC 1400 series or the VIC 15000 series. The Cisco UCS C-series servers can also connect to the UCS 6600 Fabric Interonnects (FIs) using the Cisco N93180YC-FX3 in FEX-mode.

The Cisco UCS 6600 Series Fabric Interconnects support out-of-band management, through a dedicated 10/100/1000-Mbps Ethernet management port, as well as in-band management.

The Cisco UCS 6600 Series Fabric Interconnect offers two different port-speed configurations tailored to the needs of the UCS compute infrastructure. Cisco UCS 6652 Fabric Interconnect delivers a modernized, cost-effective upgrade path for customers operating at 10/25/50G ethernet and 64G FC. For environments moving toward 100G ethernet connectivity and 64G FC, the Cisco UCS 6664 Fabric Interconnect provides a higher-bandwidth option—both are built on the same next-generation Cisco cloud-scale ASIC.

Cisco UCS 6652 52-Port Fabric Interconnect

The Cisco UCS 6652 Fabric Interconnect (FI) is a 1-RU top-of-rack switch that mounts in a standard 19-inch rack such as the Cisco® R Series rack. The 6652 is a 10/25/50 Gigabit Ethernet, FCoE, and 16/32/64G Fibre Channel switch offering up to 8.44 Tbps throughput and up to 52 ports. The switch has 16 unified ports (port numbers 17–32) that can support 10/25/50 Gbps SFP Ethernet ports or 16/32/64 Gbps Fibre Channel ports, 32 10/25/50 Gbps Ethernet SFP ports (port numbers 1–16 and 33–48) and 4 QSFP-DD 40/100/400 Gbps Ethernet uplink ports (port numbers 49–52). All Ethernet ports are capable of supporting FCoE.

© 2026 Cisco and/or its affiliates. All rights reserved.

The Cisco UCS 6652 Fabric Interconnect also has one network management port, one console port for setting the initial configuration, and one USB port for saving or loading configurations. It also includes L1/L2 ports for connecting two fabric interconnects for high availability.

From a networking perspective, the Cisco UCS 6652 FI uses a cut-through architecture, supporting deterministic, low-latency, line-rate 10/25/50 Gigabit Ethernet ports and a switching capacity of 8.44 Tbps, independent of packet size and enabled services. It enables 400Gbps bandwidth per Cisco UCS X9508 Chassis with X9108-IFM-25G in addition to enabling end-to-end 25G Ethernet and 200G aggregate bandwidth per Cisco UCS X210c /X410c compute node. The Cisco UCS 6652 FI provides connectivity for 5108 chassis with IOM-2408 at 25G Ethernet. The C-series rack server can direct-connect or connect via Cisco N93180YC-FX3 FEX at 10/25G ethernet to the Cisco UCS 6652 FI. In addition to 10/25G speeds the UCS 6652 FI also enables 50G ethernet connectivity for UCS C-series rack server with UCS VIC 15000 series adapter and upgrading to 50G connectivity doubles the ethernet bandwidth at similar cost and power compared to 25G connectivity, and delivers an end-to-end 50G design across ethernet and 64G FC for storage I/O.



Figure 2.
Cisco UCS 6652 52-Port Fabric Interconnect – back view



Figure 3.
Cisco UCS 6652 52-Port Fabric Interconnect – front view

Cisco UCS 6664 64-Port Fabric Interconnect

The Cisco UCS 6664 Fabric Interconnect (FI) is a 2-RU top-of-rack switch that mounts in a standard 19-inch rack such as the Cisco R Series rack. The 6664 is a 10/25/40/50/100 Gigabit Ethernet, FCoE and 16/32/64G Fibre Channel switch offering up to 11.65 Tbps throughput and up to 64 ports. The switch has 16 unified ports (port numbers 25-40) that can support 10/25/50-Gbps SFP Ethernet ports or 16/32/64-Gbps Fibre Channel ports, 48 40/100-Gbps Ethernet QSFP ports (port numbers 1-24 and 41-64). All Ethernet ports are capable of supporting FCoE.

The Cisco UCS 6664 Fabric Interconnect also has one network management port, one console port for setting the initial configuration, and one USB port for saving or loading configurations. It also includes L1/L2 ports for connecting two fabric interconnects for high availability.

© 2026 Cisco and/or its affiliates. All rights reserved.

From a networking perspective, the Cisco UCS 6664 FI use a cut-through architecture, supporting deterministic, low-latency, line-rate 10/25/40/50/100 Gigabit Ethernet ports, switching capacity of 11.65 Tbps, independent of packet size and enabled services. It enables 1600Gbps bandwidth per X9508 chassis with X9108-IFM-100G in addition to enabling end-to-end 100G ethernet and 200G aggregate bandwidth per X210c/X410c compute node. With the X9108-IFM-25G and the IOM 2408, UCS 6664 FI enables 400Gbps bandwidth per chassis per FI domain. Additionally, Cisco C-series rack-servers can direct-connect at 10/25/100G to Cisco 6664 FI or via using the Cisco N93180YC-FX3 in fex-mode.

The Cisco 6600 series FI supports Cisco low-latency, lossless 10/25/40/50/100 Gigabit Ethernet unified network fabric capabilities, which increases the reliability, efficiency, and scalability of Ethernet networks. The Cisco 6600 series FI supports multiple traffic classes over a lossless Ethernet fabric from the server through the fabric interconnect. Significant TCO savings come from the Cisco Unified Fabric—optimized server design in which Network Interface Cards (NICs), Host Bus Adapters (HBAs), cables, and switches can be consolidated.

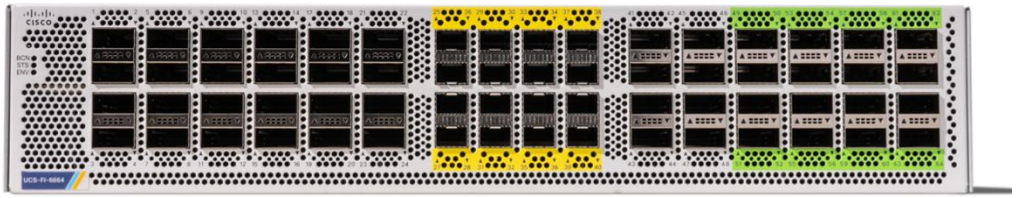


Figure 4.
Cisco UCS 6664 64-Port Fabric Interconnect – back view



Figure 5.
Cisco UCS 6664 64-Port Fabric Interconnect – front view

© 2026 Cisco and/or its affiliates. All rights reserved.

Table 1 summarizes the characteristics of the Cisco UCS 6652 and 6664 Series fabric interconnects.

Table 1. Characteristics of Cisco UCS 6652 and 6664 Series fabric interconnects

Item	Cisco UCS 6652 Fabric Interconnect	Cisco UCS 6664 Fabric Interconnect
Description	52-port fabric interconnect	64-port fabric interconnect
Form factor	1RU	2RU
Number of fixed 10/25/40/100-Gbps and FCoE ports with optional unified ports	52 fixed ports	64 fixed ports
Maximum number of unified ports	16 (unified ports 17–32)	16 (unified ports 25–40)
Maximum number of 1-Gbps Ethernet ports	0	0
Maximum number of 10/25-Gbps Ethernet ports	64 (48 sfp + breakout of 4 QSFP ports)	64
Maximum number of 50-Gbps Ethernet ports	48	16
Maximum number of 40/100-Gbps Ethernet ports	4 (ports 49–52)	48 (ports 1–24 and 41–64)
Maximum number of 400-Gbps Ethernet ports	4 (ports 49–52)	0
Maximum number of 16/32/64-Gbps FC ports	16 (unified ports 17–32)	16 (unified ports 25–40)
Throughput	8.44 Tbps	11.648 Tbps
Fan modules	5	4

Features and benefits

Table 2 summarizes the features and benefits of Cisco UCS 6600 Series Fabric Interconnects.

Table 2. Features and benefits

Feature	Benefits
Power supply	• Two power supplies (AC)
Management (Cisco UCS Manager/Cisco Intersight	• Allows all elements connected to the interconnects to participate in a single, highly available management domain
Unified fabric	• Decreases TCO by reducing the number of NICs, HBAs, switches, and cables required • Support Fibre Channel and Ethernet traffic concurrently in a Unified Fabric
Fabric extender architecture	• Scales to 20 blade chassis without adding complexity by eliminating the need for dedicated chassis management and blade switches and by reducing the number of cables needed • Provides deterministic latency for optimized application performance

© 2026 Cisco and/or its affiliates. All rights reserved.

Feature	Benefits
Performance	• Provides high-speed, low-latency connectivity to the chassis • Provides approximately 50 percent reduction in end-to-end system latency (Latency is less than 1 microsecond.)
Lossless fabric	• Provides a reliable, robust foundation for unifying LAN and SAN traffic on a single transport
Priority-based Flow Control (PFC)	• Simplifies management of multiple traffic flows over a single network link • Supports different classes of service, helping enable both lossless and classic Ethernet on the same fabric
Systemwide bandwidth management	• Helps enable consistent and coherent Quality of Service (QoS) throughout the system.
Rear ports	• Helps keep cable lengths short and efficient
Redundant hot-swappable fans and power supplies	• Helps enable high availability in multiple configurations • Increases serviceability • Provides uninterrupted service during maintenance • Each fan module consists of two fan rotors. Redundancy of fan is implemented in the rotor level, with a total of 12 rotors across 6 fan modules.
Front-to-back cooling	• Fan-side intake, port-side exhaust
QSFP28-compatible Ports	• Allows all ports to be configured to operate in 40/100 Gbps Ethernet mode with the transceiver options specific for use with QSFP28-compatible ports in Table 3
Licensing options	• Ships with a perpetual license. This license activates all the ports and software features of the Fabric Interconnect and no license management is needed from the customer.

Hardware interoperability:

Cisco UCS 6600 Series Fabric Interconnects are compatible with the Cisco UCS hardware given in Table 3.

Table 3. Cisco UCS 6600 Series Interconnect-supported IFM, IOM, FEX, VIC, and servers

Supported chassis, IFM, IOM, FEX, VIC, servers	Cisco UCS 6652 Fabric Interconnect	Cisco UCS 6664 Fabric Interconnect
Chassis	Cisco UCS X9508 Chassis, Cisco UCS 5108 Blade Server Chassis	Cisco UCS X9508 Chassis, Cisco UCS 5108 Blade Server Chassis
Intelligent Fabric Module	UCSX-9108-25G, IOM-2408	UCSX-9108-25G, UCSX-9108-100G, IOM 2408
Fabric Extender	N9K-C93180YC-FX3 in FEX mode	N9K-C93180YC-FX3 in FEX mode
I/O adapter	Cisco UCS VIC 1400/14000 Series, Cisco UCS VIC 15000 Series	Cisco UCS VIC 1400/14000 Series, Cisco UCS VIC 15000 Series

© 2026 Cisco and/or its affiliates. All rights reserved.

Supported chassis, IFM, IOM, FEX, VIC, servers	Cisco UCS 6652 Fabric Interconnect	Cisco UCS 6664 Fabric Interconnect
Servers	Cisco UCS B-Series/X-Series (Intel® or AMD) M5 and newer, Cisco UCS C-Series (Intel or AMD) M6 and newer	Cisco UCS B-Series/X-Series (Intel or AMD) M5 and newer, Cisco UCS C-Series (Intel or AMD) M6 and newer

Note: Cisco UCS FI 6652 and Cisco UCS 5108 Blade Server Chassis support with the Cisco UCS 6664 Fabric Interconnect is available from the Cisco UCS 6.0(2) release.

For the Optics interoperability information please review product spec sheet.

Product specifications

Table 4 summarizes the Cisco UCS 6652 and Cisco UCS 6664 fabric interconnect specifications.

Table 4. Cisco UCS 6652 and Cisco UCS 6664 fabric interconnect specifications

Feature	Cisco UCS 6652 Fabric Interconnect	Cisco UCS 6664 Fabric Interconnect
Ports	52 ports	64 ports
Supported speeds	10/25/40/50/100/400-Gbps Ethernet/FCoE and 16/32/64-Gbps Fibre Channel	10/25/40/50/100-Gbps Ethernet/FCoE and 16/32/64-Gbps Fibre Channel
CPU	4 cores	4 cores
System memory	32 GB	32 GB
Management ports	1	1
USB ports	1	1
Power supplies (up to 2)	1400W (AC)	1400W (AC)
Typical operating power	368W	605W
Maximum power (AC)	1100W	1100W
Input voltage (AC)	100 to 240 VAC	100 to 240 VAC
Frequency	50 to 60 Hz	50 to 60 Hz
Fans	5	4
Airflow	Standard airflow – front (PSU/fan-side) to back (port-side exhaust)	Standard airflow – front (PSU/fan-side) to back (port-side exhaust)
Efficiency (AC)	94 to 91% (50 to 100% load)	94 to 91% (50 to 100% load)
RoHS compliance	Yes	Yes
Hot swappable	Yes	Yes

© 2026 Cisco and/or its affiliates. All rights reserved.

Cisco UCS FI 6600 series physical and environmental specifications

Table 5 summarizes the physical and environmental specifications for Cisco UCS 6600 series Fabric Interconnects.

Table 5. Physical and environmental specifications

Property	Cisco UCS 6652 Fabric Interconnect	Cisco UCS 6664 Fabric Interconnect
Physical (height x width x depth)	1.72in x 17.3in x 19.69in (4.37 cm x 43.94 cm x 50.01 cm)	3.39 x 17.41 x 22.28 in. (8.6 x 44.2 x 56.6 cm)
Operating temperature	32 to 104° F (0 to 40° C)	32 to 104° F (0 to 40° C)
Nonoperating temperature	–40 to 158° F (–40 to 70° C)	–40 to 158° F (–40 to 70° C)
Humidity	5 to 95%	5 to 95%
Altitude	0 to 10,000 feet (0 to 3,048 meters)	0 to 10,000 feet (0 to 3,048 meters)

Weight

Table 6 summarizes the weights for the Cisco UCS 6664 and Cisco UCS 6652 fabric interconnects.

Table 6. Weight, including power supplies and fan modules

Component	Weight
Cisco UCS 6664 FI with two power supplies and four fans installed	44 lb (20 kg), with fans
Cisco UCS 6652 FI with two power supplies and five fans installed	25lb (11.34 kg), with fans

Regulatory standards compliance: safety and EMC

Table 7 summarizes regulatory compliance for Cisco UCS 6664 and Cisco UCS 6652 fabric interconnects.

Table 7. Regulatory standards compliance: safety and EMC

Specification	Description
Regulatory compliance	Products should comply with CE Markings according to directives 2004/108/EC and 2006/95/EC.
Safety	• UL 60950-1 Second Edition • CAN/CSA-C22.2 No. 60950-1 • EN 60950-1 Second Edition • IEC 60950-1 Second Edition • AS/NZS 60950-1 • GB4943
EMC: Emissions	• 47CFR Part 15 (CFR 47) Class A • AS/NZS CISPR22 Class A • CISPR22 Class A

© 2026 Cisco and/or its affiliates. All rights reserved.

Specification	Description
	• EN55022 Class A • ICES003 Class A • VCCI Class A • EN61000-3-2 • EN61000-3-3 • KN22 Class A • CNS13438 Class A
EMC: Immunity	• EN55024 • CISPR24 • EN300386 • KN 61000-4 series
RoHS	The product is RoHS 6-compliant with exceptions for leaded Ball-Grid-Array (BGA) balls and lead press-fit connectors.

Ordering information

Table 8 presents ordering information for Cisco UCS 6664 and Cisco UCS 6652 fabric interconnects.

Table 8. Ordering information

Part number	Description
Fabric interconnects	
UCS-FI-6664-U	2RU FI, with no PSU, with 64 ports
UCS-FI-6664-SW	Auto included mandatory perpetual software license
UCS-FI-6652-U	1RU FI, with no PSU, with 52 ports
UCS-FI-6652-SW	Auto included mandatory perpetual software license
Power supply and fan	
UCS-PSU-6600-AC	UCS 6600 platinum power supply/100-240VAC (1400 W)
UCS-FAN-6664	UCS 6664 fan module
UCS-FAN-6652	UCS 6652 fan module
Accessory and blank	
UCS-ACC-6664	UCS 6664 chassis accessory kit
UCS-ACC-6652	UCS 6652 chassis accessory kit

© 2026 Cisco and/or its affiliates. All rights reserved.

Warranty information

Find warranty information at Cisco.com on the Product Warranties page.

Cisco environmental sustainability

Information about Cisco's environmental sustainability policies and initiatives for our products, solutions, operations, and extended operations or supply chain is provided in the "Environment Sustainability" section of Cisco's Corporate Social Responsibility (CSR) Report.

Reference links to information about key environmental sustainability topics (mentioned in the "Environment Sustainability" section of the CSR Report) are provided in the following table:

Sustainability topic	Reference
Information on product material content laws and regulations	Materials
Information on electronic waste laws and regulations, including products, batteries, and packaging	WEEE compliance

Cisco makes the packaging data available for informational purposes only. It may not reflect the most current legal developments, and Cisco does not represent, warrant, or guarantee that it is complete, accurate, or up to date. This information is subject to change without notice.

Cisco Services for Unified Computing

Using a unified view of data-center resources, Cisco and our industry-leading partners deliver services that accelerate your transition to a unified computing architecture. Cisco Services for Unified Computing help you quickly deploy your data center resources, simplify ongoing operations, and optimize your infrastructure to better meet your business needs. For more information about these and other Cisco services for the data center, visit https://www.cisco.com/go/unifiedcomputingservices.

Why Cisco?

The Cisco Unified Computing System continues Cisco's long history of innovation in delivering integrated systems for improved business results based on industry standards and using the network as the platform. Recent examples include IP telephony, LAN switching, unified communications, and unified I/O. Cisco began the unified computing phase of our unified data center strategy several years ago by assembling an experienced team from the computing and virtualization industries to augment our own networking and storage access expertise. As a result, Cisco delivered foundational technologies, including the Cisco Nexus family, supporting Cisco Unified Fabric and server virtualization. Cisco UCS completes this phase, delivering innovation in architecture, technology, partnerships, and services. Cisco is well positioned to deliver this innovation by taking a systems approach to computing that unifies network intelligence and scalability with innovative ASICs, integrated management, and standard computing components.

© 2026 Cisco and/or its affiliates. All rights reserved.

Cisco Capital

Flexible payment solutions to help you achieve your objectives

Cisco Capital® makes it easier to get the right technology to achieve your objectives, enable business transformation and help you stay competitive. We can help you reduce the total cost of ownership, conserve capital, and accelerate growth. In more than 100 countries, our flexible payment solutions can help you acquire hardware, software, services and complementary third-party equipment in easy, predictable payments. Learn more.

For more information

For more information about Cisco UCS, visit https://www.cisco.com/en/US/products/ps10265/index.html.

Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV Amsterdam,
The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at **https://www.cisco.com/go/offices**.

Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: https://www.cisco.com/go/trademarks. Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1110R)

Printed in USA C78-5189051-01 10/26

© 2026 Cisco and/or its affiliates. All rights reserved.